APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/586,601	06/02/2000	Shuji Ono	3562-0103P	6153

7590 05/10/2006	**EXAMINER**

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DATE MAILED: 05/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>22 February 2006</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-30</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-30</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>22 February 2006</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 2/22/2006 have been fully considered but they are

not persuasive.

Regarding independent claims 1 & 11, the Applicant asserts that Kung fails to

teach or suggest the predetermined selection condition being specified by a user

(remarks, page 13). In response, the Examiner respectfully disagrees. As disclosed by

Kung in Fig. 1 and col. 4, lines 1-54, the face database (16) and eye database (20)

store predetermined selection conditions such as predetermined facial features and eye

features which must have been specified by a user/operator in advance by defining

human face and eyes (i.e., size, shape, etc) in order for the apparatus to detect and

recognize the person in the scene as disclosed. Generally, without the face database

and eye database specified in advance, the apparatus would not be able to detect and

recognize the person in the scene.

Regarding independent claim 8, the Applicant asserts that Nozaki does not teach

or suggest the claimed feature of "extracting data on an aimed object from each of said

plurality of images" or "selecting a desire image including a desired aimed object from

among said plurality of images." The Applicant further mentions that the Office Action of

May 5, 2004 acknowledged that Nozaki does not teach the selection of an image based

upon a desired aimed object (remarks, page 14). In response, the Examiner

respectfully clarifies that during reconsideration of the claim 8, the teaching of Nozaki in

paragraph [0226] meets the aforesaid limitations. In [0226] & [0218], three images are captured and an aimed object (designated at the center of the image) of each of three images is extracted for evaluation. It is clear in Nozaki that "a desired image including a desired aimed object" is selected as a desired image having a center object satisfying the shooting condition (good condition) excluding a burry background. This good image is selected from among three images. Additionally, Nozaki also discloses "the predetermined selection condition being specified by a user" in paragraph [0229], wherein predetermined good/bad conditions are specified by the user by virtue of selecting "**a mode** to select an image in response to good/bad evaluation of the shooting state" which is displayed on the viewfinder. Thus, Nozaki does meet the limitations of claim 8.

Regarding claim 10, the Applicant further asserts that Windle's template is not a condition to be satisfied by a desired aimed object. The Examiner, however, clarifies that Windle is relied upon for teaching of a user interface (i.e., a setting unit) being capable to select one of a plurality of camera setting conditions since Nozaki teaches a plurality of conditions to be selected but being silent about a user interface. Therefore, the combination of Nozaki and Windle is valid for claim 10.

Regarding claims 9, 17, 21, 22, 25 & 26, the combined teachings of Nozaki/Iijima, Nozaki/Kung and Kung/Nozaki are also valid for these claims because the Applicant has not specifically pointed out any features/limitations other than the above mentioned features.

Drawings

2.   The drawings were received on 2/22/2006. These drawings are Fig. 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 1-7, 11-16, 18-20, 23, 24, 27 & 29 are rejected under 35 U.S.C. 102(b) as

being anticipated by Kung et al (US 5,850,470).

Regarding claim 1, Kung discloses an image selecting apparatus (10) from

among a plurality of images (video images of an arbitrary scene 11) obtained by

continuously photographing a subject (see Fig. 1; col. 4, lines 1-54), comprising:

an extractor (14, 18, 22) extracting data of an aimed object (face, eyes and other

facial features) from each of said plurality of images, said aimed object corresponding to

an independent object (e.g., eyes) within the image (within the image scene 11) at

which a photographer aims (see Fig. 1; col. 4, lines 1-54);

a condition-storing unit (face database 16, eye database 20, person database

26) storing a plurality of predetermined selection conditions (predetermined face

features, eyes features, etc.) for a desirable aimed object, each of the stored

predetermined selection condition being specified by a user (Fig. 1; col. 4, line 1 – col.

5, line 26; also see the Examiner's response in section 1 above);

a selecting unit (18, 22, 24) selecting at least one selection condition (i.e., at least

eyes features stored in eye database 20 for recognizing various different eyes) from

among the plurality of predetermined selection conditions resulting in a selection of a

desired image (a desired image having a person's face is selected for further

processing after face detector 14) including a desired aimed object from among said

plurality images, said desired aimed object satisfying said at least one selection

condition (at least eyes features) stored in said condition-storing unit. See col. 4, lines

24-54.

Regarding claim 2, Kung discloses that the extractor extracts the data of the

aimed object based on depth information (coordinates information of eyes relating to

other features of the object such as eyebrows and nose; see col. 2, lines 64 – col. 3,

line 6) indicating the distance to each part of the subject.

Regarding claim 3, Kung discloses that the extractor extracts said data of said

aimed object based on image information included in each of said images (col. 4, lines

14-54).

Regarding claim 4, Kung also discloses that the extractor detects a judgment

location (i.e., eye coordinates) from said data of said aimed object based on image

information included in each of said images (see col. 4, lines 35-54), said at least one

selection condition includes a predetermined selection condition (i.e., coordinates of

various different eyes stored in the eye database 20) related to a desirable judgment

location, and said selecting unit selects said desired aimed object including a judgment

location satisfying said at least one selection condition related to said desirable

judgment location (for the person to be recognized). See col. 4, lines 35-54 and col. 5,

lines 10-15.

Regarding claim 5, see the analysis of claim 3, and note that "data of a plurality

of said aimed objects from each of said plurality of images" is indicated by data of

plurality of eyes, eyebrows and nose as described in col. 4, lines 44-54.

Regarding claim 6, see the analysis of claim 4 and note the Examiner's comment

in claim 5.

Regarding claim 7, Kung discloses that the selecting unit further comprises an

image composite unit compositing said plurality of desired aimed objects (eyes,

eyebrows and nose) to form a composite image (a face formed with facial features as

shown in Fig. 1; col. 4, lines 55-65), said composite image including said plurality of

desired aimed objects for each of said plurality of aimed objects extracted from said

plurality of images.

Regarding claims 11-16, see the analyses of claims 1-6, respectively.

Regarding claim 18, it is clear that the conditions relate to at least one of shape or size of eyes or nose of the aimed object (see col. 4, lines 24-54).

Regarding claim 19, Kung also discloses that at least one predetermined selection condition relates to expression of said aimed object for identifying said desired aimed object. See Fig. 1 and col. 4, lines 24-54, wherein expression of the aimed object is indicated by the shape or size of the eyes, eyebrows or nose in a normal expression.

Regarding claim 20, it is also clear that the selecting unit selects said desired image without an operation of a user (automatic face recognition; see col. 4, lines 1-3).

Regarding claims 23 & 24, see the analyses of claims 19 & 20.

Regarding claims 27 & 29, as seen in Fig. 1 and col. 4, lines 1-64, at least one of the predetermined conditions (i.e., at least one of eyes features) is selected by the user in advance (during setting the eye database 20) from a plurality of potential selection conditions (i.e., faces, noses and other eyes features).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

4.   Claims 8 & 28 are rejected under 35 U.S.C. 102(e) as being anticipated by

Nozaki et al (US 2003/0193610 A1).

Regarding claim 8, Nozaki discloses a camera (Figs. 1-3) comprising:

an input unit (image pickup means 1) forming a plurality of images of subjects

(see [0048]);

an extractor (shooting evaluation means 3) extracting data of an aimed object

(i.e., an object located at the center of camera's screen) from each of said plurality of

images formed by said input unit ([0045], [0049], [0218] and [0226]);.

a condition-storing unit (an inherent memory) storing a predetermined selection

condition (shooting conditions, i.e., good and bad conditions) for a desirable aimed

object (see [0044]-[0049], wherein "a condition-storing unit" must exist in order for the

camera to function as disclosed), the predetermined selection condition being specified

by a user (see [0229], wherein the predetermined selection condition is specified by a

user by virtue of "a mode to select an image in response to a good/bad evaluation of

shooting state" being selected and displayed on the viewfinder);

a selecting unit (still image selection means 4) selecting a desired image

including a desired aimed object from among said plurality of images, said desired

aimed object satisfying said predetermined selection condition stored in said condition-

storing unit (see [0048]-[0049]).

Regarding claim 28, as seen in [0229], "a mode to select an image in response to

a good/bad evaluation of the shooting state" is selected by a user before capturing

images. This mode is representing at least one of predetermined conditions and is also

among a plurality of other potential modes/conditions described in [0225] and [0189]-

[0192].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nozaki et

al (US 2003/0193610 A1) in view of Iijima et al (US 6,823,080 B2).

Regarding claim 9, Nozaki does not disclose that the input unit includes a

parallactic image data input unit inputting a parallactic image photographed from

different view points, and said extractor extracts said data said aimed object based on

depth information indicating the distance each part of said subject, said depth

information being extracted from said parallactic image. However, Nozaki suggests that

evaluation items other than those recited in the Nozaki's disclosure may be used to

determine which image to select (see Nozaki, [0078]). In other reference to Iijima, a

camera comprises a parallactic image input unit (Figs. 2 and 3A & B) inputting a

parallactic image photographed from different view points (right and left images sensors

102 R & 102L). Iijima further teaches an extractor (image separator 105) for extracting

data of an aimed object (object 2, Fig. 2) based on depth information indicating the

distance to each part of the object and the depth information being extracted from the

parallactic image. See Iijima, col. 13, line 64 – col. 14, line 3.

Therefore, it would have been obvious to one of ordinary skill in the art to

combine the apparatus of Nozaki and the teaching of Iijima with the practice of using

parallactic image data captured from different view points of a parallactic image capture

unit and extracting depth information from the parallactic image data so as to improve

selection of an aimed object with high precision for further processing.

6.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nozaki

et al (US 2003/0193610 A1) in view of Windle (US 6,606,117 B1).

Regarding claim 10, Nozaki teaches a plurality of selection conditions that may

be used to determine how to select an image from a plurality of images (Nozaki, [0072]-

[0078]). Nozaki further teaches a plurality of modes representing a plurality of selection

conditions to be selected (Nozaki, [0229] and [0189]-[0192]). Nozaki is just silent about

a condition-setting unit previously selecting at least one of the selection conditions, for

selecting the desired image, from among a plurality of selection conditions. As taught

by Windle, a camera comprises an user interface unit 105 (Fig. 1) that is used for

setting a selection condition from among a plurality of selection conditions (Fig. 3; col. 4,

lines 39-58; col. 6, lines 1-25 and col. 7, line 44 – col. 8, line 32).

Therefore, it would have been obvious to one of ordinary skill in the art to

combine the apparatus in Nozaki with the teaching of Windle to provide a user interface

for allowing the user to select a plurality of setting options including a selection condition

among a plurality of selection conditions, thereby a highly operable imaging apparatus

having a user friendly interface would be realized.

7.   Claims 21 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Nozaki et al (US 2003/0193610 A1) in view of Kung et al (US 5,850,470).

Regarding claim 21, Nozaki does not teach that the predetermined selection

condition relates to expression of the aimed object for identifying the desired aimed

object. However, Nozaki suggests that evaluation items other than those recited in the

Nozaki's disclosure may be used to determine which image to select (see Nozaki,

[0078]). Kung teaches that expression (facial feature of a person) of an aimed object

(the person's face) is pre-stored for identifying a desired aimed object (see Kung; Fig. 1;

col. 4, lines 1-54).

Therefore, it would have been obvious to one of ordinary skill in the art to
enhance the apparatus of Nozaki to include a predetermined selection condition relating
to expression of an aimed object for identifying a desired object so that not only good
image would be obtained but also images of different users would be classified and
recognized accordingly.

Regarding claim 22, it is clear that desired image is selected without an operation
of a user (see Nozaki, [0049], [0080]-[0081] and/or Kung, col. 4, lines 1-3).

8.   Claims 17, 25, 26 & 30 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Kung et al (US 5,850,470) in view of Nozaki et al (US 2003/0193610
A1).

Regarding claim 17, Kung discloses all limitations discussed in claim 1 except for
explicitly disclosing a stored program that is executed by a computer to perform the
method of claim 1. It is well known that an image processing apparatus can be
implemented with software program stored in a recording medium, which is to be
executed by a microprocessor to process images as taught by Nozaki in [0081]. Such
implementation of software program would reduce hardware circuitry and provide
flexibility for system upgrade.

Therefore, it would have been obvious to one of ordinary skill in the art to modify
the imaging apparatus in Kung by using a program stored in a memory to be executed

by a microprocessor for processing images so as to reduce hardware circuitry and

provide flexibility for system upgrade.

Regarding claims 25 & 26, see the analyses of claims 19 & 20.

Regarding claim 30, see the analysis of claim 27.

Conclusion

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-

7371. The examiner can normally be reached on Monday - Thursday, 7:30am -

5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NT.

DAVID OMETZ
SUPERVISORY PATENT EXAMINER